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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,576	02/09/2004	Eric Theodore Bax		1471

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EXAMINER

ADAMS, CHARLES D

ART UNIT PAPER NUMBER

2164

DATE MAILED: 08/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/775,576

Applicant(s)

BAX ET AL.

Examiner

Charles D. Adams

Art Unit

2164

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

  
**SAM RIMELL**  
**PRIMARY EXAMINER**

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 1, the claim contains subject matter that is optionally recited. As such, the claims bear no patentable weight. See MPEP § 2106 Section II(C):

The subject matter of a properly construed claim is defined by the terms that limit its scope. It is this subject matter that must be examined. As a general matter, the grammar and intended meaning of terms used in a claim will dictate whether the language limits the claim scope. Language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation. The following are examples of language that may raise a question as to the limiting effect of the language in a claim:

- (A) statements of intended use or field of use,
- (B) "adapted to" or "adapted for" clauses,
- (C) "wherein" clauses, or
- (D) "whereby" clauses.

This list of examples is not intended to be exhaustive. >See also MPEP § 2111.04.<

Specifically, lines 6-13 are optionally recited and may not actually occur. The claim contains a limitation that only takes place 'if' a certain condition occurs. Because that condition is not guaranteed, all limitations following an 'if' may not actually occur and, as such, bear no patentable weight.

Claim 1 recites the limitation "beginning with a first text from a list of texts as a computation text". This is unclear, as there is no definition of what is 'beginning'. Nor is 'beginning', or any sort of initialization process, defined. Therefore, the claimed subject matter is unclear.

Claim 1 recites the limitation "the next computation text" in line 9, "the present computation text" in lines 9-10, and "the first computation text" in line 14. There is insufficient antecedent basis for these limitations in the claim.

Claim 1 recites the limitation "continuing until the text list is exhausted" in line 16. The word "continuing" is not defined, nor is there any indication of what is being continued. There is also no definition for the word "exhausted". As such, the claim is unclear.

As to claim 2, the word "together" is not defined. As such, it is unclear exactly what is being claimed.

As to claim 3,

The terms "lowest" and "highest" in claim 3 are relative terms which render the claim indefinite. The terms "lowest" and "highest" are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one

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of ordinary skill in the art would not be reasonably apprised of the scope of the invention. As such, the claim is unclear.

Limitations placed in parentheses are indefinite because it is unknown whether or not the limitations are positively recited.

The term "normally" in line 6 is undefined. There is no definition as to what a 'normal' method is. As such, the claim is unclear.

As to claim 4,

the claim contains subject matter that is optionally recited. As such, the claims bear no patentable weight. See MPEP § 2106 Section II(C).

Line 4 of the claim recites the limitation "if the search string lacks all characters in said set of characters". The claim contains a limitation that only takes place 'if' a certain condition occurs. Because that condition is not guaranteed, all limitations following an 'if' may not actually occur and, as such, bear no patentable weight.

The claim recites the limitation "making an alternative text list in which each occurrence of a character in a set of characters is replaced by some character in the set". As written, the limitation seems to say that a character in a character set is replaced by another character from that set. However, nothing is being done with this set, and there is no correlation between this set and the alternative list. Therefore, it is

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unclear exactly how the "alternative set" is different from the "original set". As such, the claim is unclear.

Claim 4 recites the limitation "the original text list" in 5. There is insufficient antecedent basis for this limitation in the claim.

As to claim 5,

the claim contains subject matter that is optionally recited. As such, the claims bear no patentable weight. See MPEP § 2106 Section II(C).

Line 3 of the claim recites the limitation "if the present computation text is not the first computation text". The claim contains a limitation that only takes place 'if' a certain condition occurs. Because that condition is not guaranteed, all limitations following an 'if' may not actually occur and, as such, bear no patentable weight.

The limitation "the computation text" in line 1 is unclear, as both "the first computation text" and "the present computation text" are recited before it in the claim.

Claim 5 recites the limitation "the previous column" in line 2 and "the characters corresponding to the column" in line 3. There is insufficient antecedent basis for these limitations in the claim.

### ***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

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Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-5 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claims do not recite a practical application by producing a physical transformation or producing a useful, concrete, and tangible result. To perform a physical transformation, the claimed invention must transform an article or physical object into a different state or thing. Transformation of data is not a physical transformation. A useful, concrete, and tangible result must be either specifically recited in the claim or flow inherently therefrom. To be useful the claimed invention must establish a specific, substantial, and credible utility. To be concrete the claimed invention must be able to produce the same results given the same initial starting conditions. To be tangible the claimed invention must produce a practical application or real world result. In this case the claims fail to produce a useful or tangible result. As to usefulness, there is no claimed result of the computations recited in the claims. As to tangibility, there is no claimed real world result or output.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 1, 2, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zien et al. (US Patent 6,556,984) in view of Navarro ("A Guided Tour to Approximate String Matching").

As to claim 1, Zien teaches:

Beginning with a first text from a list of texts as a computation text (see column 2, lines 39-48);

Providing a search string (see 2:39-48)

Zien et al. does not teach and a threshold value.

Navarro teaches and a threshold value (see page 36, section 3.1. A  $k$  value is indicated as a maximum error allowed and section 5.3.1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Zien by the teaching of Navarro, since Navarro teaches an overview of methods for approximate string methods. As it is common to have a threshold value in edit distance calculations, so it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included one.

Zien as modified teaches performing a column-by-column grid computation of edit distance between the search string and the computation text (see 4:58-5:11);

The remainder of the limitation is optionally recited and thus bears no patentable weight. The next three limitations are also optionally recited and thus bear no patentable weight. Refer to the rejections under 35 USC § 112 above.



Zien as modified teaches applying the same procedure for the first computation text, but re-using columns corresponding to any prefix shared with the present computation text (see Zien 5:20-49).

Zien as modified teaches continuing until the text list is exhausted (see 6:42-64).

As to claim 2, Zien as modified teaches ordering the text list to place texts with shared prefixes together in the list (see Figures 3A and 3B, and 6:65-7:19).

As to claim 5, the subject matter of the claim is optionally recited. However, Zien as modified teaches wherein the step of performing a column-by-column grid computation of edit distance further comprises the steps of:

If the present computation text is no the first computation text, then re-using a column for the computation text if the previous column is the same as for the previous computation text (see Zien 5:20-49), and at least one of the following conditions holds:

The characters corresponding to the column in the present computation text and the previous computation text are the same (see Zien 5:20-49);

The search string lacks the characters corresponding to the column in the present computation text and the previous computation text.


### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles D. Adams whose telephone number is (571) 272-3938. The examiner can normally be reached on 8:30 AM - 5:00 PM, M - F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571) 272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Charles Adams  
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**SAM RIMELL**  
**PRIMARY EXAMINER**